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Utility Scale Renewable Energy Development near DOD Installations

Making the Case for Land Use Compatibility

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Comments expressed are strictly those of the Briefer, and not necessarily the views or positions of the Battelle Memorial Institute or the Department of Defense

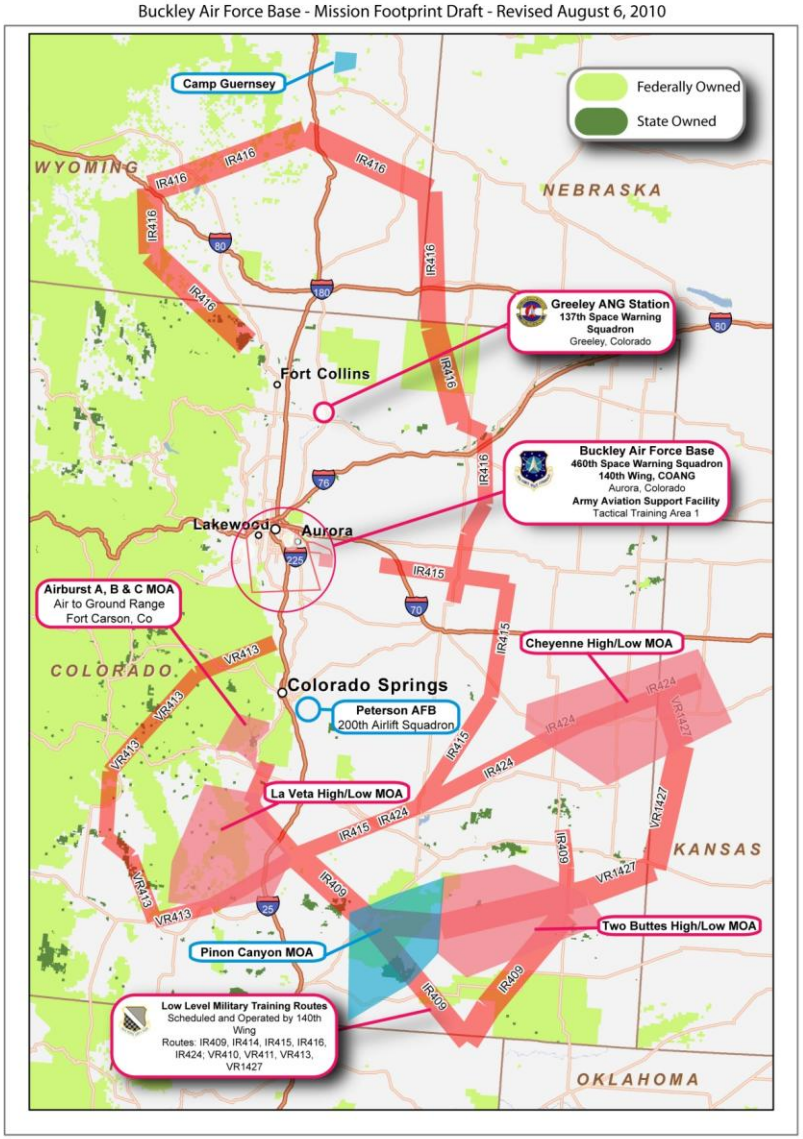
Sizing the Issue

- Utility scale renewable energy development near DOD installations, ranges and Military Operational Areas/Special Use Airspace can affect mission operations and readiness
- In the US, Land Use Planning is a "states-right" issue – tied to "Police Powers"
  - Goal: Acceptable zoning rules and consistent zoning enforcement to achieve mutual co-existence in "harmony"
    - A patchwork of state, county and local zoning ordinances
    - Federal Agency permitting efforts tied to Public Lands and environmental laws
- In the West, much of DOD operates from DOI's Public Lands "withdrawn" for "military purposes"
  - In CA alone, BLM is currently (Oct 2010) processing 64 Wind and 38 Solar applications – expected to provide 579 MW (Solar) and 29 GW (Wind) spanning over 1 M acres of Public Lands
  - BLM's ongoing Solar Programmatic EIS will build on their Energy Corridors effort, and provide a blueprint for future development

-- More --

Sizing the Issue (Con't)

- DOD's desire is seek "land use compatibility" via reasonable land use controls
  - Consistent with the larger Federal land use planning philosophy
    - Ensure the greatest good of Public Lands to the maximum number of citizens
    - Minimize Federal land holdings, consistent with current and future Federal needs



Defining Mission-Land Compatibility

- Compatibility, in relationship to military readiness, is the balance or compromise between community needs and interests and the needs and interests of the military
- The goal of compatibility planning is to promote an environment where both entities can balance impacts

Compatibility Factors		Natural Resources
Land Use	Local Housing Availability	Water Quality/Quantity
Safety Zones	Renewable Energy -- Wind-Radar Interference -- Solar Thermal IR Interference	T&E Species & Critical Habitat
Hazards to Flight -- Vertical Obstructions	Air Quality	Marine Environments
Visual Inference & Obstruction -- Light and Glare -- Dust/Smoke/Water Vapor	Frequency Spectrum Interference	**Competition for Scarce Resources**
Infrastructure Extensions	Public Trespassing	Scarce Natural Resources
Antiterrorism/Force Protection	Culture Sites	Land, Air, Sea and Space Development
Noise	Legislative Initiatives	Frequency Spectrum Capacity
Vibration		Ground Transportation

Principles Common to Ensuring Compatible Energy Development (From the Federal Point of View)

- **Significant outreach engagement & building partnerships**
- **Issue-oriented processes**
- **Understand Federal, state, county and local permitting processes**
- **Reasonable timeframes & situational awareness**
- **Timely administrative and judicial review**
- **Active compliance permitting monitoring**

Developers, and the Federal Sector must master the *Individual* State, County and Local Permitting Processes , including:

Mandatory, state-level siting statutes;
Voluntary guidelines for siting within states;
Model ordinances for local governments to apply and use;
Local government siting rules; and
Voluntary checklists and resources for local governments to recommend

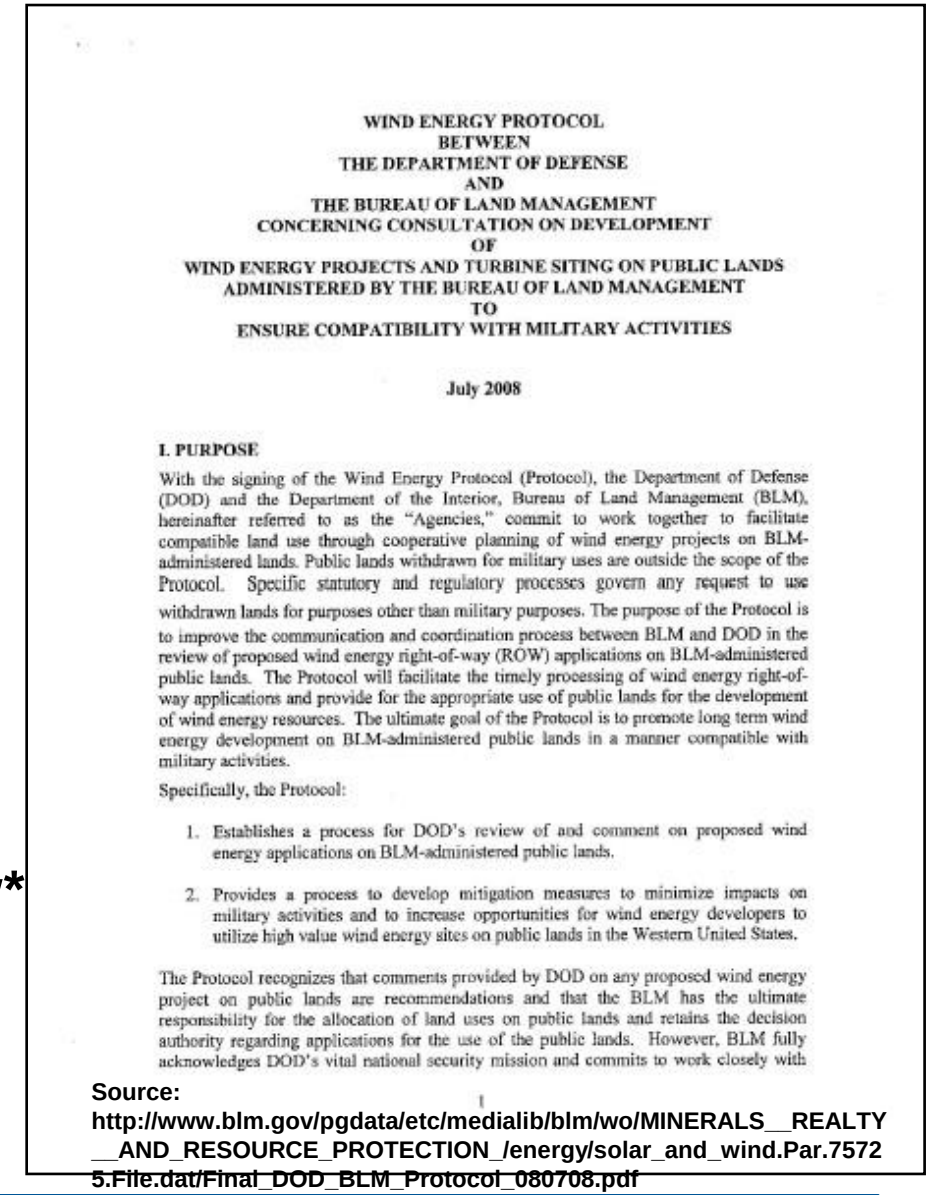
Federal Departments' Planning Processes

- FAA -- Hazards to Flight/Obstruction Clearance
- BLM -- Seek best possible use of Public Lands for the good of the Public – DOD/DOI Protocol
- F&WS -- Wildlife management
- Corps of Engineers – Water navigation
- Bureau of Ocean Energy Management, Regulation and Enforcement – Outer Continental Shelf compatible use
- EPA – Environment regulation
- NWS – No known process
- DOD (and DHS)
  - Energy Siting Clearinghouse
  - Radar-Renewable Energy Impacts
  - Land/Sea/Airspace/Space use compatibility

DoD-BLM Wind Energy Protocol

- Improves communication and coordination between agencies
- Establishes a process for DoD's review/comment on proposed wind energy projects on BLM lands
- Provides process to develop mitigation measures
- Directs shared use of GIS tools
- Designates DOD's Regional Environmental Coordinators (RECs) as AO for military review*
- Only formal RE protocol in use

**Determinations of unmitigable effect must now be forwarded to OSD for decision*



WIND ENERGY PROTOCOL
BETWEEN
THE DEPARTMENT OF DEFENSE
AND
THE BUREAU OF LAND MANAGEMENT
CONCERNING CONSULTATION ON DEVELOPMENT
OF
WIND ENERGY PROJECTS AND TURBINE SITING ON PUBLIC LANDS
ADMINISTERED BY THE BUREAU OF LAND MANAGEMENT
TO
ENSURE COMPATIBILITY WITH MILITARY ACTIVITIES

July 2008

I. PURPOSE

With the signing of the Wind Energy Protocol (Protocol), the Department of Defense (DOD) and the Department of the Interior, Bureau of Land Management (BLM), hereinafter referred to as the "Agencies," commit to work together to facilitate compatible land use through cooperative planning of wind energy projects on BLM-administered lands. Public lands withdrawn for military uses are outside the scope of the Protocol. Specific statutory and regulatory processes govern any request to use withdrawn lands for purposes other than military purposes. The purpose of the Protocol is to improve the communication and coordination process between BLM and DOD in the review of proposed wind energy right-of-way (ROW) applications on BLM-administered public lands. The Protocol will facilitate the timely processing of wind energy right-of-way applications and provide for the appropriate use of public lands for the development of wind energy resources. The ultimate goal of the Protocol is to promote long term wind energy development on BLM-administered public lands in a manner compatible with military activities.

Specifically, the Protocol:

1. Establishes a process for DOD's review of and comment on proposed wind energy applications on BLM-administered public lands.

2. Provides a process to develop mitigation measures to minimize impacts on military activities and to increase opportunities for wind energy developers to utilize high value wind energy sites on public lands in the Western United States.

The Protocol recognizes that comments provided by DOD on any proposed wind energy project on public lands are recommendations and that the BLM has the ultimate responsibility for the allocation of land uses on public lands and retains the decision authority regarding applications for the use of the public lands. However, BLM fully acknowledges DOD's vital national security mission and commits to work closely with

Source:
http://www.blm.gov/pgdata/etc/medialib/blm/wo/MINERALS__REALTY__AND_RESOURCE_PROTECTION_/energy/solar_and_wind.Par.75725.File.dat/Final_DOD_BLM_Protocol_080708.pdf

Arizona – Preservation of Military Airports

- 2001 Act (AZ SB 1525)
- Codifies at the State Level:
  - Comprehensive Plan must address compatibility with Accident Potential Zones, Noise Contours, Over flight and Training Corridors
  - Opportunity for military to comment on rezoning application
  - Requirements to buyers/developers
    - Expectations from military activities in the "box"
    - Limits ability to file suit/claim for damages
    - Stops the "Nobody told me" argument
- Impacted by Property Rights Laws (AZ Proposition 207)

Graphics prepared by PARSONS
Sources: Davis-Monthan AFB, Pima County, City of Tucson, and ESRI

Understanding the States' Role

- STATE OREGON
- LEAD AGENCY Energy Facility Siting Council
- GUIDELINE INFORMATION Or. Rev. Stat. §§469.300 – 469.560; OR Admin. Rules Chapter 345
- REQUIREMENTS AND ISSUES GOVERNED: The framework for siting wind energy facilities with generating capacities of 105 MW or more is outlined in the state's energy policy. Associated legislative policy statements outline the state's commitment to not leaving future generations with a legacy of vanished or depleted resources as a result of a growth in demand for nonrenewable energy.
- *State-Level Siting Process*
- Oregon law requires permits, or site certificates, before any large wind energy facility can be constructed in the state. The Oregon Energy Facility Siting Council has primary responsibility for issuing site certificates for wind facilities that have peak generating capacities of 105 MW or more.
- The site certificate serves as a consolidated state permit. Therefore, if the Siting Council issues a site certificate, then other state and local government permits required for the project also must be issued. These other permits potentially include Conditional Use Permits for land use, Water Rights, Wetlands Removal or Fill Permits and other environmental permits based on state regulations. Issuing agencies and governments are bound by the site certificate. Once a certificate has been issued, the state agencies and local governments must issue their permits, subject only to conditions contained in the site certificate.
- This system allows for coordination of permitting through one state agency – the Oregon Department of Energy. This means that there is one public hearing, one contested case, and one avenue for appeal of decisions. There is only one level of judicial review of a site certificate – all appeals go directly to the Oregon Supreme Court.
- The Siting Council has the authority to apply conditions to its approval of a site certificate. It is important to note that the Siting Council does not select the location of a proposed energy facility and cannot require a developer to locate a proposed facility at a different location.
- *Local-Level Siting Process*
- In contrast to the consolidated state-level approach, local-level siting decisions for wind facilities of less than 105 MW (peak generating capacity) are far more complex. Developers should initially apply to the land use planning authorities in local jurisdictions where wind facilities are proposed and follow their procedures to obtain conditional use permits. Concurrently, developers would need to contact all appropriate state agencies to ensure that proposed wind facilities would qualify under all other permitting regulations that affect site approval. An important point to note is that, although a conditional use permit is binding on local government, it is not binding on state agencies.

Source: STATE SITING AND PERMITTING OF WIND ENERGY FACILITIES, URL: http://www.nationalwind.org/assets/publications/Siting_Factsheets.pdf

Energy Siting

Acquisition, Technology and Logistics

- Challenges
  - Homeland Surveillance
  - Radar and Weapon System Testing
  - Operations and Training
  - 30-day Notification to FAA
- Opportunities
  - Technological solutions
  - Voluntary early notification
- Way Forward
  - Data collection
  - Interagency R&D task force
  - Energy Siting Clearinghouse

Source: DUSD/I&E

Joint Land Use Studies (JLUS)

- DOD's Office of Economic Adjustment
  - 10 USC Sec 2391 authorizes DOD to fund community planning assistance grants to state and local government to help better understand and incorporate military base air and land use compatibility technical data into local planning programs
  - Provides cooperative land use planning efforts between affected local government and the associated military installation(s).
    - JLUS recommendations present a rationale and justification, and provide a policy framework to support adoption and implementation of compatible development measures designed to prevent:
      - Urban encroachment
      - Safeguard the military mission
      - Protect the public health, safety, and welfare
  - Recently studies incorporated state-wide military land use planning opportunities and constraints, including renewable energy issues

Source: http://odam.defense.gov/omp/pubs/guidebook/OEA.htm

Air Force Interim Guidance
18 Jun 2010

"We must get ahead of this challenge to preserve valuable national resources designated for Air Force missions and to ensure the ability to effectively test, train, and operate to ultimately fly, fight and win"

DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

JUN 18 2010

MEMORANDUM FOR ALMAJCOM/CV

SUBJECT: Interim Guidance – Managing Energy Development Impacts on Air Force Operations

As domestic energy development increases, the Air Force must take an active management approach to minimize impacts on Air Force missions. As a result, we created the attached Interim Guidance to help bridge the gap until DoD and other federal agencies create comprehensive policies and processes that assess impacts earlier. This guidance provides MAJCOMs a standardized reference when considering threats to operating space and acting on missions impacted by energy development proposals.

The United States is committed to domestic renewable energy resources to strengthen America through energy diversity, economic growth, and increased security. The renewable energy economy is rapidly expanding in the United States as evidenced by it adding wind systems faster than any other country in the world. This exponential growth is unprecedented in our nation's history and is affecting Department of Defense and Air Force missions in ways we did not anticipate. The Air Force strongly supports a national energy plan that considers mission impacts along with renewable energy goals.

Renewable energy development increasingly occupies real estate adjacent to or under Air Force operating space. Given the rate of industry growth, energy development encroachment on Air Force operations has arrived. We must come to grips with these realities as an institution and develop a plan while working with OSD, the Joint Staff, other Services, and other federal agencies on comprehensive solutions. This is not an Operational, Environmental, Civil Engineering, or any other singular functional community's problem to solve. All stakeholders, including MAJCOMs, ***must*** become involved to truly realize the effects on the Air Force mission and preserve Air Force operating space.

We must get ahead of this challenge to preserve valuable national resources designated for Air Force missions and to ensure the ability to effectively test, train and operate to ultimately fly, fight, and win. Our POC for this guidance is Lt Col Carlos Gacharna, AF/A3O-BR, DSN 425-2002, juan.gacharna@pentagon.af.mil

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Some Technical Gaps Exist in Federal Planning to Support Renewable Energy Development

- Interactive mapping (GIS) and data repository tools
- "Whole of Government" transparency and visibility on reviews
- Timeliness of decision making
- Guidance and support to Federal Agencies:
  - What the Federal Agencies can do
  - What the RE developers can do
  - Where Federal R&D investments might support mutual co-existence
- Assessment/prioritization of air, land, sea and space assets required for current and future mission
- Defined engagement strategy for private lands
- Consistent "Whole of Government" outreach at local/regional/national levels

A List of What Might be Done

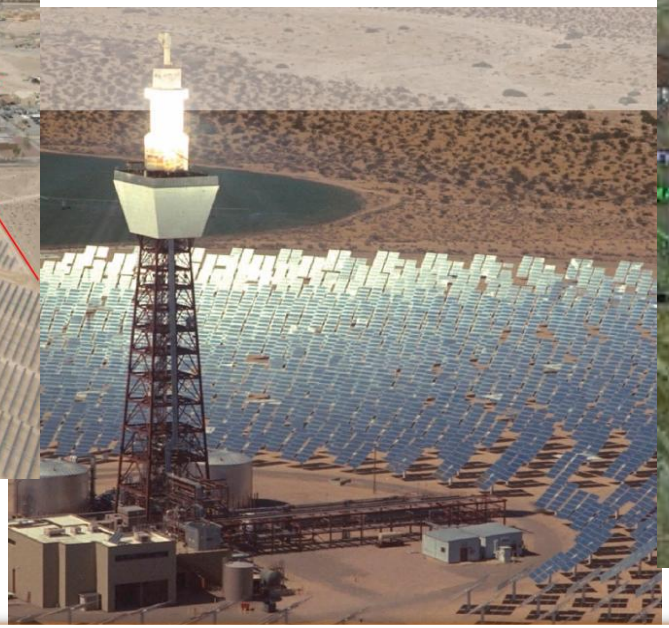
- Expand model state, county and local zoning rules to incorporate Utility Scale Renewable Energy issues
- Codify a repeatable, streamlined Federal-level interagency governance siting process for renewable energy projects; make compatible with state, county and local efforts
  - Establish an “one-stop” Federal clearinghouse that ensures transparent, timely siting decisions, synchronized with attendant State and local land use planning processes
  - Departments & Agencies siting standards must be published, and coordinated across the whole of government
  - Document the Role of the DOD Regional Environmental Coordinators
- Create, and make public a set of (simple to complex) planning and analysis tools; ensure transparency, yet protect developers equity

-- More --

A List of What Might be Done (Con't)

- **Publish/fund a R&D Roadmap – efforts must be greater than just DOD**
  - **Work OSTP's R&D task force on wind/radar interference as a model for an interagency solution**
- **Continue to use JLUS to better understand, and resolve the nexus between military readiness & Renewable Energy development**
- **Expand DOD-wide something like the AF's 18 Jun 2010 *Interim Guidance – Managing Development Impacts on Air Force Operations***
- **Update Federal policy, including DOD Instructions, FAA Circulars, DOI, DOE, and DOC Rules, etc.,**
- **Conduct appropriate outreach/education to all parties involved**

Closing Thoughts



"Renewable energy development increasingly occupies real estate adjacent to or under Air Force operating space. Given the rate of industry growth, energy development encroachment of Air Force operations has arrived. We must come to grips with these realities as an institution and develop a plan [with the whole of government)] on comprehensive solutions." Interim Guidance – Managing Energy Development Impacts on Air Force Operations, 18 Jun 2010